

APPENDIX B

EFFECTS

FINDINGS

CONSISTENCY

ASSESSMENT



Appendix B

Consistency Review of Forest Plan Documentation

Sensitivity of the original environmental consequences analysis of Alternative 9 of the Northwest Forest Plan to the proposed language change.

The Interdisciplinary Team (IDT) reviewed Northwest Forest Plan (NWFP) effects findings to determine whether the findings are influenced or altered by the proposed language change.

None of the effects findings explicitly rely on the language proposed for change. The NWFP effects findings do rely on the four components of the Aquatic Conservation Strategy (watershed analysis, watershed restoration, Riparian Reserves and Key Watersheds). These components are retained in the Proposed Action.

SOURCE: Final Supplemental EIS on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl, Volume I, February 1994, Chapter 3&4

Chapter 1 **Purpose and Need**

FSEIS, Volume 1, Chapter 1, pg. 1 - 7

There are no assumptions within this section that depend on or are sensitive to the Proposed Action. Implementation of the Proposed Action would not modify or change any of the analytic assumptions or conclusions of this chapter.

Chapter 2 **The Alternatives**

FSEIS, Volume 1, Chapter 2, pg. 3 - 84

There are no assumptions within this section that depend on or are sensitive to the Proposed Action. Implementation of the Proposed Action would not

modify or change any of the analytic assumptions or conclusions of this chapter.

Chapter 3&4

Affected Environment and Environmental Consequences

FSEIS, Volume 1, Chapters 3&4, pgs. 3 -10

There are no assumptions within this section that depend on or are sensitive to the Proposed Action. Implementation of the Proposed Action would not modify or change any of the analytic assumptions or conclusions of this chapter.

Ecosystems and Species

FSEIS, Volume 1, Chapters 3&4, pg. 11 - 24

There are no assumptions within this section that depend on or are sensitive to the Proposed Action. Implementation of the Proposed Action would not modify or change any of the analytic assumptions or conclusions of this chapter.

Terrestrial Ecosystems

FSEIS, Volume 1, Chapters 3&4, pgs. 24 – 51

The Terrestrial Ecosystems section of Chapters 3&4 focused on an analysis of the alternatives relative to their ability to provide for and maintain a functional and interconnected, late-successional forest ecosystem. Three attributes, as listed below, were used to rate each alternative in relation to four possible outcomes in each attribute.

FSEIS, Volume 1, Chapters 3&4, pgs. 35

“The rating of Late-Successional ecosystems was based on three attributes that characterize the quantity and quality of components of the ecosystems...”

Abundance and ecological diversity – the acreage and variety of plant communities and environments.

Processes and functions – the ecological actions that lead to the development and maintenance of the ecosystem, and the values of the ecosystem for species and populations.

Connectivity – the extent to which the landscape patterns of the ecosystem provides for biological flows that sustain animal and plant populations.”

Late –Successional reserves were intended to be the primary mechanism for

maintaining large blocks of late-successional habitat within the range of the northern spotted owl. None of these three elements explicitly refers to the ACS or any component of the ACS. The third attribute, Connectivity, however depends on the Riparian Reserves to maintain connectivity on the landscape.

The conservation assumptions of the Northwest Forest Plan are dependent on Riparian Reserve allocations. Repeated throughout the analysis are frequent references to the Riparian Reserves and their conservation function. However, Riparian Reserves are initially set by the application of preliminary standards based on the height of site potential trees. Watershed analysis is intended to modify Riparian Reserves based on an “analysis of the critical hill slope, riparian, and channel processes and features” (FSEIS, Appendix B, p. B-86). The Proposed Action does not affect the watershed analysis process. The Proposed Action will not change the Riparian Reserve standards and will not affect the LSR ratings that derived from this attribute.

FSEIS, Volume 1, Chapters 3&4, pg. 43

“During the next 100 years, none of the alternatives provides for a higher than 60 percent likelihood of reaching an outcome in which the quality and quantity of the overall late-successional ecosystem ... would be at least as high as the hypothesized long-term average condition (Outcome 1). The Assessment Team concluded that a longer timeframe may be necessary for this change to occur.”

FSEIS, Volume 1, Chapters 3&4, pg. 45

“[N]one of the alternatives achieved a likelihood of 80 percent or greater for Outcome 1 for any of the individual attributes However, Alternatives 1,3,4,5, and 9 had at least one attribute that had an 80 percent or greater cumulative likelihood of achieving Outcomes 1 and 2 combined ”

Again, because the attributes used for rating LSR were not sensitive to the language change proposed, the general ranking of the LSRs and their likelihood of reaching a particular outcome, are not changed.

Only Attribute 3, Connectivity, seems sensitive to elements of the ACS. But as we pointed out earlier, Attribute 3 depends greatly on Riparian Reserve allocations, which will not change under the Proposed Action.

FSEIS, Volume 1, Chapters 3&4, pg. 45

“The results indicate that none of the alternatives had a 60 percent or greater likelihood of producing a late-successional and old-growth ecosystem with attributes that approximate at least long-term average conditions (Outcome 1) over a timeframe of 100 years. This occurs primarily because 100 years is not long enough for cutover landscapes to return to late-successional conditions that approximate prelogging conditions. Many late-successional attributes require 200 to 500 years to develop. In addition, many larger scale disturbance processes, such as severe wildfires, will probably not occur under any of the alternatives, at least not to the extent that they would in an environment that was not influenced by humans.”

The NWFP assumed that the proportion of late-successional habitat on the landscape would increase at different rates depending on the alternative chosen. They typically used a common, 100-year timeframe to evaluate the different alternatives. Because the three attributes used to evaluate late-successional habitat on the landscape are not sensitive to the language changes proposed, the effects of the Proposed Action will be within the scope of the original effects analysis.

FSEIS, Volume 1, Chapters 3&4, pg. 45

“Some alternatives have an 80 percent or greater cumulative likelihood of achieving an overall ecosystem condition at 100 years that is hypothesized to fall within the typical range of conditions that have occurred over previous centuries (Outcomes 1 and 2 combined). This does not mean, however, that all attributes and stands would meet this condition. Many young forest plantations within reserves are not developing along typical pathways, and fire suppression has and will alter stand and landscape-level processes that are typical in these ecosystems. In general, high rates of logging, forest plantations, fire suppression, ownership patterns, and human population and environmental influences have altered the regional ecosystem on federal lands to the extent that none of the alternatives can provide for a return to conditions that closely match those of previous centuries. Also, it is not expected that all ecosystem processes, such as wildfire, will be allowed to perform their natural functions across the landscape.”

Late successional ecosystems were ranked according to the three attributes. And only one of those three explicitly depended on an element of the ACS – the Riparian Reserve system. Given that this proposal does not change the Riparian Reserves, it will not affect the original ranking of LSRs.

FSEIS, Volume 1, Chapters 3&4, pg. 45-46

“Some of the alternatives provide greater livelihoods than others of maintaining and

enhancing the late-successional ecosystem at levels that approach typical long-term conditions. Alternatives 1, 3, 4, and 9 received the highest ratings (Figure 3&4-3)."

The primary mechanism for providing conservation benefits is the land allocations. The Proposed Action does not alter any land allocations.

FSEIS, Volume 1, Chapters 3&4, pg. 46

"Alternative 9 achieved a 60 to 80 percent or greater likelihood rating for the overall ecosystem for Outcomes 1 and 2 combined in moist and dry provinces (Table 3&4-9). Alternative 9 might have achieved a higher overall rating if it provided for more acreage of late-successional ecosystems in the low elevations in Oregon. The Assessment Team stated that the opportunities to enhance knowledge about ecosystem function and management in the Adaptive Management Areas of Alternative 9 actually increased the likelihood that this alternative would provide late-successional characteristics in the future."

The three attributes of the rating system, as detailed on pages 3&4 – 34-39 of the FSEIS, are not sensitive to the language changes proposed in this SEIS. The Adaptive Management Areas (AMAs) were established independent of the ACS and ACS Objectives and would not be affected by the proposed language change. The AMA standards are not sensitive to differences in the application of the ACS Objectives at the site-specific scale.

Aquatic Ecosystems

FSEIS, Volume 1, Chapters 3&4, pg. 65

"The likelihood of achieving an outcome of sufficient quality, distribution and abundance of habitat to allow fish populations to stabilize, well distributed across federal lands, is lower for Alternatives 2, 3, 5, 6, and 10 than for Alternatives 1, 4, and 9. Alternative 9's standards and guidelines would provide a level of habitat protection comparable to Alternative 4 because of the incorporation of Riparian Reserve Scenario 1 discussed in this chapter. However, the Assessment Team concluded that all alternatives will reverse the trend of degradation and begin recovery of aquatic ecosystems on federal lands within the range of the northern spotted owl except for Alternatives 7 and 8. Even if changes in land management practices and comprehensive restoration programs are initiated, it is possible that no alternative will completely recover all degraded aquatic systems within the next 100 years. The ecosystem assessment shows that the likelihood of attaining a functional and interconnected late-successional and old-growth forest ecosystem in the next 100

years is reduced because some characteristics of terrestrial ecosystems will not be obtained for at least 200 years. Similarly, the Assessment Team expected that degraded aquatic ecosystems will not be fully functional in 100 years. Faster recovery rates are probable for aquatic ecosystems under Alternatives 1 and 4, and Alternative 9, which includes the standards and guidelines added since the Draft SEIS than under the other alternatives (Figure 3&4-6). Alternatives 1 and 4 and Alternative 9 with the standards and guidelines incorporated since the Draft SEIS would reduce management-related disturbance across the landscape due to application of a larger Late-Successional Reserve network and use of the more protective Riparian Reserve Scenario 1 which requires wider Riparian Reserve widths for intermittent streams in Tier 2 Key Watersheds and non-Key Watersheds.”

The ACS SEIS does not propose to modify the land allocations, Riparian Reserves or Key Watersheds. The expected outcomes are supported by the ACS SEIS and will not change as a result of this proposal.

FSEIS, Volume 1, Chapters 3&4, pg. 68

“Decision makers will use the information developed during a watershed analysis to support decisions and to determine if a proposed project meets Aquatic Conservation Strategy objectives. This is a new approach; in the past, proposed projects were considered from the context of what effects (positive and negative) a proposed project would have on the conditions and functions and processes of a watershed.”

The ACS SEIS does not propose to modify the Watershed Analysis. The expected outcomes are supported by the ACS SEIS and will not change as a result of this proposal.

FSEIS, Volume 1, Chapters 3&4, pg. 69

“The 143 Tier 1 Key Watersheds were selected specifically for contributing directly to the conservation of habitat for at-risk anadromous salmonids, bull trout, and resident fish species. The 21 Tier 2 Key Watersheds are important sources of high quality water (Appendix B6, Table B6-3).”

The ACS SEIS does not propose to modify Key Watersheds. The expected outcomes to at-risk anadromous salmonids are supported by the ACS SEIS and will not change as a result of this proposal.

FSEIS, Volume 1, Chapters 3&4, pg. 80-81

“Alternatives 1 and 4 and Alternative 9 which includes the standards and guidelines incorporated since the Draft SEIS benefit aquatic and riparian

habitats more than the other alternatives. These benefits are principally due to: (1) the application of Riparian Reserve Scenario 1 to intermittent streams in Tier 2 Key Watersheds and non-Key Watersheds, (2) the highest amounts of Late-Successional Reserves within Key Watersheds and throughout the range of the northern spotted owl, and (3) the least amount of the matrix contained within inventoried roadless areas. Aquatic and riparian habitats are expected to recover faster under Alternatives 1, 4 and 9, in part, due to these factors.”

The ACS SEIS does not propose to modify the land allocations, Riparian Reserves, Key Watersheds or roadless area designation. The expected outcomes are supported by the ACS SEIS and will not change as a result of this proposal.

FSEIS, Volume 1, Chapters 3&4, pg. 81

“The standards and guidelines for Alternatives 7 and 8 are not adequate to reverse the trend of aquatic and riparian habitat degradation and begin recovery of these habitats. The principal reasons are the lack of explicitly defined Riparian Reserves for Alternative 7, and the application of Riparian Reserve Scenario 3 for Alternative 8.”

The ACS SEIS does not propose to modify the Riparian Reserves. The expected outcomes are supported by the ACS SEIS and will not change as a result of this proposal.

Air and Water Quality and Soil Productivity:

FSEIS, Volume 1, Chapters 3&4, pg. 107

*“The effects to water quality under the alternatives vary depending on the acreages and distribution of the various land allocations and the type and location of land disturbing activities occurring under the alternative. The **most significant factors** related to potential water quality effects for each alternative are the Riparian Reserve scenarios, the level and location of road building, and the amount and method of timber harvest permitted.” “Alternatives 1, 4, and 9 would have the least adverse effects to water quality” (Emphasis added)*

All of these alternatives (FSEIS 1, 4, 9, and ACS SEIS No Action and Proposed Action) have the same riparian reserve scenario of 2:1:1 (fish bearing, non fish bearing and intermittent). The level and location of road building is determined by Standards and Guidelines, which remain unchanged. The amount of timber harvest would not exceed that assumed in Alternative 9 under either the No Action or Proposed Action.

FSEIS, Volume 1, Chapters 3&4, pg. 107

“Based on the Riparian Reserve scenarios and other components of the Aquatic Conservation Strategy, all of the alternatives except 7 and 8 are expected to maintain or improve water quality, although watershed recovery rates would be quickest for Alternatives 1, 4, and 9.”

Rates of recovery are related to the presence of Key watersheds (3&4-69) in the alternatives and the allocation of large percentages to LSR and riparian reserves (see table 3&4 – 13 page 71 also table 2-4), under these alternatives.

FSEIS, Volume 1, Chapters 3&4, pg. 107

“The level of water quality protection under Alternatives 1, 4, and 9 should also benefit water supply systems within and downstream from lands administered by the Forest Service and BLM. The Riparian Reserve scenarios and other components of the Aquatic Conservation Strategy under these three alternatives should contribute to the ability of water systems to remain unfiltered and comply with Safe Drinking Water Act requirements.”

As described above, the no-action and the proposed alternative reflect the attributes of the alternative 1 and 9 categories in the FSEIS and therefore both are expected to allow water suppliers to comply with Safe Drinking Water Act requirements.

FSEIS, Volume 1, Chapters 3&4, pg. 107

*“Adverse **cumulative effects** to water quality and water supply systems would be the greatest under Alternatives 7 and 8 and the least under Alternatives 1, 4, and 9. The level of cumulative effects for Alternatives 2, 3, 5, 6 and 10 would fall somewhere between the prior two groups of alternatives. The difference in cumulative effects among alternatives is primarily a function of the alternatives’ proposed level of land disturbance (e.g., roads, harvest levels) and the degree of Aquatic Conservation Strategy adoption.”(Emphasis added)*

The proposed land disturbance among alternatives is related to land use allocations, with matrix LUA representing a higher level of disturbance than LSR, AMA etc. Alternative 1, 4 and 9 represent the lowest levels of matrix LUA. As described above, the No Action and the Proposed Action reflect the range of Alternatives 1 & 9 and therefore both are expected to represent the least cumulative effects.

FSEIS, Volume 1, Chapters 3&4, pg. 107

“The broad scale application of the full Aquatic Conservation Strategy within the range of the northern spotted owl will significantly reduce the potential for adverse cumulative effects to water quality. Land disturbances will be more localized and related primarily to land allocations and standards and guidelines that apply. Cumulative effects will be further addressed in subsequent analyses and for tiered plans and projects.”

No Action may not allow “broad scale application of the full EIS.” As discussed in the effects analysis in Chapter 3&4, some projects that have long-term desirable benefits are less likely to occur. The reduction in projects, some of which represent restoration and maintenance opportunities, may not represent a full or comprehensive implementation of the restoration component of the ACS. If deferment of projects such as culvert upgrades continues into the future, there could be adverse cumulative effects during flood periods. Both alternatives rely on the Standards and Guidelines with land disturbance assumed to be lower for the No Action alternative due to the reduction in projects overall. The need for cumulative effects analysis in NEPA and watershed analysis will not change under either alternative.

FSEIS, Volume 1, Chapters 3&4, pg. 108

“Riparian Reserves and the other components of the Aquatic Conservation Strategy would provide greater protection of water quality, fish habitat, and riparian areas than is currently required for nonfederal lands, particularly for Alternatives 1, 4, and 9.”

This remains consistent under both the no action and the proposed alternative. Although there have been changes to the Forest Practices Act in Oregon, application of Riparian Reserves in the ACS is a more comprehensive set of best management practices, largely due to the reserves on intermittent streams.

FSEIS, Volume 1, Chapters 3&4, pg. 108

“The role of nonfederal landowners is significant because water quality protection on federal lands alone may not ensure attainment of water quality standards downstream.”

The validity of this statement has not changed since the implementation of the NWFP. It is recognized that the success of the strategy in headwater areas with blocked federal ownership does not depend on these non-federal lands. This statement of success is less applicable in multi-ownership watersheds

since water withdrawals, discharges to streams, modifications of streamside habitat, and population densities are generally greater on nonfederal lands than on federal lands. Neither ACS-SEIS alternative is likely to have an effect to water quality in downstream reaches where private lands have a significant influence. Neither ACS-SEIS alternative will change the validity of these assumptions.

FSEIS, Volume 1, Chapters 3&4, pg. 112

“The most common types of management disturbances that affect soils and related long-term productivity include soil displacement and compaction, erosion (surface and mass wasting), and alteration of nutrient status and soil biology. Late-Successional Reserves, Riparian Reserves, and Administratively Withdrawn Areas have the highest probability of maintaining long-term soil productivity because they will have the least amount of management-induced disturbance.”

Again, this is not dependent upon specific analysis approaches around the ACS objectives. The Riparian Reserves support soil protection, but no changes are proposed to the Riparian Reserve standards.

Process for Assessing Effects of Alternatives on Species habitat sufficiency on Federal Lands Within the Range of the Northern Spotted Owl

FSEIS, Volume 1, Chapters 3&4, pg. 113 - 130

FSEIS, Volume 1, Chapters 3&4, pg. 115

“More than 1000 species were identified as being associated with late-successional forests on federal lands... In addition to this list of species, 15 functional groups of arthropods, representing more than 8,000 individual species, were reviewed...”“The rating process was a subjective evaluation of the sufficiency of the amount and distribution of late-successional and old-growth habitat on federal lands under each option to support the species or group of species over the next 100 years. ...”(FEMAT Report, p. II-29)”

The original SAT, FEMAT, and FSEIS analyses reviewed thousands of organisms for their link to old-growth forests. They evaluated the relative likelihood of four viability outcomes under the different alternatives. These assessments focused on the link of each of the organisms to old-growth forests and did not directly tie into analytic approaches to the ACS. As we

have pointed out previously, Riparian Reserves partially defined the conservation commitment under each of the alternatives to each of the species or groups of species considered.

FSEIS, Volume 1, Chapters 3&4, pg. 129

“The following possible mitigation measures were developed during the species analysis process ...Those mitigation measures incorporated into Alternative 9 as standards and guidelines are in bold typeface...”

Riparian Reserves

Apply Riparian Reserve Scenario I

...

Throughout the range of the northern spotted owl.

Ensure riparian protection in Adaptive Management Areas”

The FSEIS also considered effects on additional species and laid out a methodology for additional species analysis. Possible mitigation measures were proposed for these species for Alternative 9 that applied Riparian Reserve scenario 1 throughout the range of the northern spotted owl. The incorporation of Riparian Reserve Scenario 1 set standards and guidelines for the determination and management of riparian reserves, but did not depend on site-specific application of the ACS objectives. Again, it was the land allocation that formed the basis of this assumption and conservation measure.

Species Not Threatened or Endangered

FSEIS, Volume 1, Chapters 3&4, pg. 130 - 205

FSEIS, Volume 1, Chapters 3&4, pg. 133 - 190

“Outcome ratings for lichens were generally correlated with the acreage of Late-Successional Reserves, stand treatments within the matrix, and protection for riparian corridors (aquatic and riparian lichens).” p. 147

This passage is typical of many of the references to ACS components in the species analysis section of the FSEIS. These sections cover analyses of nonvascular plants and allies, fungi, lichens, vascular plants, invertebrates (including mollusks), amphibians, reptiles, birds, and mammals (including bats). Repeated throughout this section are references to species that may be wholly or partially dependent on riparian areas. The effects or outcomes analyses for these species depend in part on the Riparian Reserve land allocation, which is not changed by the Proposed Action.

FSEIS, Volume 1, Chapters 3&4, pg. 202

“Two key points are important when considering the effects of any federal land management under each alternative on anadromous fish. First, there may be other factors such as overharvest, disease, and hatchery practices and other habitat impacts not related to timber harvest such as hydropower and irrigation developments that have caused and will continue to affect the declines of anadromous salmonid populations. Second, a plan for managing federal lands will not necessarily correct problems on nonfederal land, and anadromous fish are, in many cases, adversely affected by nonfederal actions.”

“The success of the strategy does not depend on actions on nonfederal lands. Many of the federal watersheds occur upstream of nonfederal watersheds. Thus, the strategy can succeed at maintaining and restoring the aquatic and riparian habitats regardless of what happens on nonfederal lands but that would not ensure population viability of many of the fish stocks evaluated in this SEIS.”

The projection of ACS success in terms of cumulative effects to downstream habitat is still dependant on non-federal management. The Proposed Action does not change these assumptions or invalidate these statements.

Threatened, Endangered and Proposed Species

FSEIS, Volume 1, Chapters 3&4, pg. 205 – 258

There are repeated references to the Riparian Reserves in this section. The Proposed Action does not change the Riparian Reserves.

Three Court-Identified Defects to the Forest Service 1992 FEIS

FSEIS, Volume 1, Chapters 3&4, pg. 258 – 260

Implementation of the Proposed Action would not modify or change any of the analytic assumptions or conclusions of this chapter.

Other Environmental Consequences

FSEIS, Volume 1, Chapters 3&4, pg. 319

There are no assumptions within this section that depend on or are sensitive to the Proposed Action. Implementation of the Proposed Action would not modify or change any of the analytic assumptions or conclusions of this chapter.

Conflicts with Other Plans

FSEIS, Volume 1, Chapters 3&4, pg. 319 – 321

There are no assumptions within this section that depend on or are sensitive to the Proposed Action. Implementation of the Proposed Action would not modify or change any of the analytic assumptions or conclusions of this chapter.

Irreversible or Irretrievable Commitments

FSEIS, Volume 1, Chapters 3&4, pg. 321

There are no assumptions within this section that depend on or are sensitive to the Proposed Action. Implementation of the Proposed Action would not modify or change any of the analytic assumptions or conclusions of this chapter.

SOURCE: Final Supplemental EIS on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl, Volume II, Appendix F, February 1994

Ecosystem Management

FSEIS Volume II, Appendix F. pg. F-16 to F-9

FSEIS Volume II, Appendix F. pg. F-7

“The design of the network of reserves was based on the distribution of existing late successional and old growth forests. The needs of 259 at-risk fish stocks; and the needs of the aquatic and terrestrial ecosystem. Physical attributes of the ecosystem are important to the habitat needs of individual species, and the large number of species across the planning area have a variety of needs. These physical factors were used to assist in the delineation of physiographic provinces and will be integrated into landscape/watershed-level analysis as appropriate. ”

The 259 at-risk species analyzed in the FSEIS include species that are currently listed as threatened. The proposed language change in the ACS

SEIS does not affect this outcome.

FSEIS Volume II, Appendix F. pg. F-7

“Within a broad framework, the SEIS standards and guidelines allow for a variety of management options at different scales: across the planning area, among moist and dry provinces, and within land allocations including adaptive Management Areas. Result of watershed analysis will be used in the future planning efforts. The size of the reserve network was designed to meet the needs of the late-successional forest ecosystem, including the large number of species that are dependent on that ecosystem. Ecosystem management is a component of all the land allocations in the SEIS. “

The Fish Effects Analysis in the 1994 FSEIS depends on the relationship between old-growth dependent species (at-risk fish species) and their ecosystem management approach. The Proposed Action does not alter this finding.

FSEIS Volume II, Appendix F. pg. F-7

“The viability provisions of the National Forest Management Act fish and wildlife resources regulation speak in terms of managing habitat to support each vertebrate species on the planning area. Thus, to the extent practical, the SEIS addresses individual species’ habitat conditions under each of the alternatives. The ecosystem assessment addresses these concerns through three attributes: 1) abundance and ecological diversity, 2) possesses and functions and, 3) connectivity. The interrelationships among species re highly complex and cannot be analyzed at the scale of this interrelationships among species are highly complex and cannot be analyzed at the scale of this programmatic SEIS even if they were all identified and fully understood. Each of the alternatives is designed to protect the biological diversity of a function and interconnected, late successional forest ecosystem. The additional standards and guidelines that have been incorporated in Alternative 9 in Appendix B11 further strengthen the likelihood of maintaining a function a an interconnected, late successional forest ecosystem.”

The ACS SEIS viability analysis depends on the same assumptions made in the SEIS. The Proposed Action will not change the viability outcome established in the NWFP.

FSEIS Volume II, Appendix F. pg. F-8

“The maintenance of a functional and interconnected late-successional forest ecosystem is one of the goals of this SEIS. The ecosystem is complex: its health is dependent on the health of individual species and the quantity and quality of habitat

conditions. Similarly, the health of individual species is dependent on the health of the ecosystem. The biophysical components of the ecosystem will be described in greater detail in future watershed/landscape-level analysis, as well as in province-level planning."

The NWFP depends on the relationship between the health of the ecosystem and individual species. This is consistent with the Proposed Action.

Management of Late-Successional Reserves

FSEIS Volume II, Appendix F. pg. F-10 to pg. F-11

FSEIS Volume II, Appendix F. pg. F-10

".... Thinning in unnatural, managed stands can accelerate the development of certain late-successional forest characteristics. The Final Draft Spotted Owl Recovery Plan (USDI unpub.) states that the risks of inaction outweigh the risks associated with these restoration activities. Plans for limited thinning must be beneficial to the development and maintenance of the late-successional forest ecosystem, and are subject to review by the Regional Ecosystems Office. Standards and guidelines in this Final SEIS provide for the retention of coarse woody debris in the reserves, as well as in all other land allocations. These standards and guidelines reflect the habitat needs of species other than the spotted owl, as well as those necessary for the maintenance of a late-successional forest ecosystem."

Restoration is an important component of implementing the FSEIS. Silvicultural treatments will serve to provide coarse woody debris for at-risk species. This finding is consistent with ACS SEIS effects analysis. The Proposed Action does not alter this finding.

FSEIS Volume II, Appendix F. pg. F-10

"The ratings for Outcomes 1 and 2 combined are due in part to an incomplete knowledge of ecological processes and functions. Disturbance ecology and long-term climate change are among those uncertainties described in the FEMAT Report and in Chapter 3&4, Results of Assessing the Maintenance of a Functional and Interconnected, Late-Successional Forest Ecosystem. The degree to which wildfire may be allowed to function as a natural process is not known, nor is it known if land managers have the ability to bring fuel accumulations in the dry provinces back to their natural levels before large scale wildfire events occur. Note that Alternatives 3 and 9 (as originally formulated) are rated the highest for the processes and functions attribute; Alternative 9 rates slightly higher than Alternative 3. The additional standards and guidelines added in Appendix B11, Standards and Guidelines Resulting From Additional Species Analysis and Changes to Alternative 9, improve

the ecosystem attributes of (1) abundance and ecological diversity, and (2) connectivity of Alternative 9 to a higher level than stated in the FEMAT Report and the Draft SEIS."

This ACS SEIS considers the role of natural disturbance and climate change (fire, flood). This statement holds true and is consistent with the proposed action. The ACS SEIS and will not change as a result of the proposal.

Ecosystem Assessment

FSEIS Volume II, Appendix F. pg. F-12 to F-13

FSEIS Volume II, Appendix F. pg. F-12

"Alternative 9 received its overall rating partly because of its restorative silvicultural treatments in the Late-Successional Reserves. Without these practices, the assessment of Alternative 9 would have yielded a lower result."

The ACS SEIS considers the role of restoration and recognizes that restoration is an important component of achieving the goals established in the NWFP. This is consistent with the proposed action in the ACS SEIS and will not change as a result of the proposal.

AQUATIC WILDLIFE AND HABITAT

FSEIS Volume II, Appendix F. pg. F-162 – 175

Watershed Restoration

FSEIS Volume II, Appendix F. pg. F-170 to F-171

FSEIS Volume II, Appendix F. pg. F-170

"The analysis contained in this SEIS assumes implementation of a watershed restoration program. Application of watershed restoration will be similar to that described in Appendix V-J of the FEMAT Report. The major difference is that there will not be a new team formed to specifically address watershed restoration projects. Key Watersheds serve as focal points for watershed analyses and development of the initial watershed restoration efforts. Implementation of restoration projects is expected to occur following preparation of project-specific NEPA documents, and will depend on funding."

The ACS SEIS includes the same assumptions for the watershed restoration in the Proposed Action.

FSEIS Volume II, Appendix F. pg. F-171

*“Watershed restoration was one of the factors considered, but it did not influence the results as much as other factors (such as **Riparian Reserve scenario**) included in a given alternative. The Assessment Team assumed that all alternatives except Alternative 7 contained equivalent watershed restoration programs; thus, watershed restoration was not a factor resulting in strong differences between these alternatives.”*

This statement indicates the riparian reserve scenario of 2:1:1 in both the no action and proposed action is one of the dominant factor in the FSEIS effects analysis. Both the ACS_SEIS no action and the proposed action include active and passive restoration. Although the level of active restoration is assumed to be lower under the no-action alternative, this level of reduction would not likely cause effects outside those reflected in the FSEIS, as this was not a factor resulting in strong differences between these alternatives.

Effects Analysis

FSEIS Volume II, Appendix F. pg. F-172 to 173

FSEIS Volume II, Appendix F. pg. F-172

“The outcomes for the assessment for aquatic species in Chapter 3&4 depict differences between Alternative 7, which does not contain a comprehensive watershed restoration program, and the rest of the alternatives that do contain a comprehensive watershed restoration program. Differences in outcomes, however, are not directly related to inclusion of a watershed restoration program because of variations in land allocations between alternatives.”

This statement indicates that the variation in Land Use Allocations among alternatives was one of the dominant factors in the FSEIS effects analysis. Both the no action and the proposed action include the same Land Use Allocations. The potential reduction in active restoration projects under the no action alternative would not be expected to result in strong differences in effects between these alternatives and those disclosed under the FSEIS.

WATERSHED, WATER QUALITY AND SOILS

FSEIS Volume II, Appendix F. pg. F-175 - 183

Water Quality

FSEIS Volume II, Appendix F. pg. F-177 to 179

FSEIS Volume II, Appendix F. pg. F-179

“The standards and guidelines for all alternatives except Alternative 7 provide greater water quality protection than existing practices. Where current standards and guidelines in existing Forest and District Plans (including BMPs) provide greater protection than those of the selected alternative, the current standards and guidelines will continue to apply. In addition, reduced sediment production and attendant improvement in water quality should result from the Key Watershed network and the Late-Successional Reserve and Riparian Reserve systems established by this SEIS.”

Establishes that the Standards and Guides are not the only best management practices designed or implemented to meet state water quality standards and thus provide for aquatic health. Where BMPs contained in the RMPs and Forest Plans are more stringent they are to be used. The Proposed and No Action alternatives do not change the Key Watershed network, LSRs and the Riparian Reserve system; therefore expected improvement in water quality would not change.

AQUATIC WILDLIFE AND HABITAT

FSEIS Volume II, Appendix F. pg. F-162 to F-183

Aquatic Conservation Strategy

FSEIS Volume II, Appendix F. pg. F-162 to F-165

FSEIS Volume II, Appendix F. pg. F-163

“The Aquatic Conservation Strategy is more than a system of Key Watersheds. In addition to the Key Watersheds, the strategy’s key components include Riparian Reserves and their standards and guidelines, the watershed analysis process, and watershed restoration programs. These other components provide the mechanisms to protect and restore riparian and aquatic habitat in areas within and outside Key Watersheds by creating a connected network of aquatic and riparian habitats”

The Proposed Action does nothing to change any of the four components of the ACS.

FSEIS Volume II, Appendix F. pg. F-164

“All anadromous fish require freshwater habitat to complete their life cycles. Rather than focus on a limiting-factors analysis, the Aquatic Conservation Strategy in this

SEIS emphasizes maintaining and restoring complex aquatic habitats for fish and other riparian-dependent species. A number of factors affect the survival and production of anadromous fish within the range of the northern spotted owl. Whether freshwater habitat is the limiting factor for the production of anadromous fish is less important than ensuring that high quality habitat is available to the fish during the freshwater phase of their life histories."

"The Aquatic Conservation Strategy is a regional approach to maintaining and restoring watersheds and their aquatic and riparian habitats. The strategy considers all existing and potential fish habitat and does not rely on known distributions of fish for the analysis. Fish distribution was used, however, to develop the Key Watershed network. Subsequent management actions could consider distribution of fish if deemed appropriate for the level of analysis. The watershed analysis process allows agencies to develop management objectives or restoration actions for specific streams; various reaches within a given stream; and fish groups, races, and species. The process also updates information on fish distribution."

The Aquatic Conservation Strategy adequately addresses concerns for salmonids and a diversity of other riparian-dependent species such as sculpin and amphibians. The Proposed Action does not change the ACS

Aquatic Species

FSEIS Volume II, Appendix F. pg. F-167 to F-170

FSEIS Volume II, Appendix F. pg. F-167

"One function of Riparian Reserves is to protect habitat used by riparian-dependent species, including salmonids. Riparian Reserves are designed to be large enough to protect the ecological values required by riparian-dependent plant and animal species. Objectives 1, 2, 8, and 9 of the Aquatic Conservation Strategy (Appendix B6, Aquatic Conservation Strategy) specifically address maintaining the diversity of habitat conditions necessary to support the diversity of plants, invertebrates, and vertebrates that depend on healthy riparian systems. The standards and guidelines for Riparian Reserves in Appendix B6 are designed to prohibit activities within the Riparian Reserves that retard or prevent attainment of the Aquatic Conservation Strategy objectives. Riparian-dependent species other than fish can be protected during project implementation by adjusting Riparian Reserve boundaries based on the results of watershed analysis."

The Proposed Action will not change these outcomes.

The Aquatic Conservation Strategy adequately addresses concerns for

salmonids and a diversity of other riparian-dependent species such as sculpin and amphibians. The Proposed Action does not change the ACS.

FSEIS Volume II, Appendix F. pg. F-167

“The analysis in this SEIS on the effects of the alternatives on aquatic habitat and fish was based on the seven races/species/groups of fish that use a wide range of conditions from larger river systems to headwater streams. All require clean gravel and cool, oxygenated water to reproduce, and require diverse and complex habitats. This analysis implies that providing the array of natural functions and processes in riparian and aquatic systems to benefit the seven races/species/groups would also benefit fish species for which there is little life history information. The assessments for riparian-dependent amphibians parallel the results of the assessment outcomes developed for the seven races/species/groups of fish. This supports the assumption that the habitat conditions used by the seven races/species/groups would benefit other species. A monitoring program may be developed to provide information in cases where management decisions could affect fish species about which there is little information and there is a high level of uncertainty on effects of implementing the action. This scenario fits within the adaptive management process proposed in this SEIS. To determine the effects of actions, monitoring will take into account the life history and ecology of fish that may be affected. If that information is lacking, then collecting that information could be part of the monitoring program.

The analysis did not consider individual stocks of fish. Rather, the analysis considered seven races/species/groups of fish for a number of reasons outlined in Chapter 3&4 of this SEIS. The habitat requirements of the seven races/species/groups of fish evaluated generally represented those required by the stocks at risk. Pink, chum, and sockeye salmon were not included in the assessment primarily because of their limited distribution on federal land within the range of the northern spotted owl

While the range of pink and chum salmon includes Oregon and Washington, most of these fish occur in Washington. Pink and chum salmon tend to spawn in tidally influenced portions of rivers or a short distance upstream. Some Key Watersheds encompass pink and chum salmon habitat. However, there is little federal land that overlaps tidally influenced portions of rivers and streams within the range of pink and chum salmon. Even though there are few Key Watersheds encompassing pink and chum salmon habitat, all existing and potential pink and chum salmon habitat on federal lands is encompassed by Riparian Reserves and will be adequately protected. The Aquatic Conservation Strategy identifies Key Watersheds as being areas containing important refuge habitat for the stocks at risk. The Key Watershed network will work well for coho and chinook salmon and steelhead but it is not adequate for pink and chum salmon.”

The NWFP states that the seven salmonid species assessed are reliable biological indicators and representative species dependent on high quality habitat. Therefore, not all 21 races/species/groups of fish within the range of the northern spotted owl were analyzed in detail. Specifically, the Assessment Team did not consider pink, chum, and sockeye salmon in their assessment of the likelihood of attaining a set of outcomes for habitat for fish on federal lands. The ACS SEIS fish analysis is based on the same assumption.

FSEIS Volume II, Appendix F. pg. F-167

“Even with changes in land management practices and implementation of comprehensive restoration, it is possible that none of the alternatives would completely recover all degraded aquatic ecosystems within the next 100 years.”

The habitat assessment ratings for anadromous fish stocks at risk under Alternative 9 are expected to reverse the trends of degradation and begin recovery of aquatic ecosystems and habitat on federal lands within the range of the northern spotted owl. The ACS SEIS fish analysis is based on the same assumption.

SOURCE: Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl, April 1994

Record of Decision (ROD), pg. 23-24

“The riparian reserve system will conserve aquatic resources as well as provide dispersal habitat for spotted owls and suitable habitat for numerous species. ”

The Proposed Action does not alter the size of interim Riparian Reserves nor does it alter the Standards and Guidelines that were developed to direct management activities within the Riparian Reserves.

Record of Decision (ROD), pg. 27

“All alternatives except Alternatives 7 and 8 would “reverse the trend of degradation and begin recovery of aquatic ecosystems and habitat” ...” (emphasis original).

The assessments of the alternatives of the Northwest Forest Plan that were done on the aquatic component of the original EIS are not affected by the proposed changes to the ROD. In evaluating the alternatives, the original assessments considered: (1) all of the components of the Aquatic Conservation Strategy, Riparian Reserves, Key Watersheds, Watershed

Restoration, and Watershed Analysis; and (2) potential influences of factors such as the amount and location of and activities allowed in Late Successional Reserves and matrix lands, and the amount and location of Congressionally Withdrawn Areas. With regards to Riparian Reserves, the assessment of the various options considered the size of the interim riparian reserves and the associated standards and guidelines. The Standard and Guidelines were assumed to apply primarily to activities in the Riparian Reserve. The Proposed Action does not change Riparian Reserves.

Record of Decision (ROD), pg. 46

“Our decision also contains elements that provide for owl dispersal habitat, including wide Riparian Reserves ”

The Proposed Action does not change the Riparian Reserves.